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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/724,581

11/26/2003

Osamu Omori

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10/03/2005

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EXAMINER

MITCHELL, JAMES M


ART UNIT

PAPER NUMBER

2813

DATE MAILED: 10/03/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No. 10/724,581	Applicant(s) OMORI, OSAMU	
	Examiner James M. Mitchell	Art Unit 2813	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 30 June 2005.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) 15-20 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-14 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>1/12/04, 5/24/04</u> | 6) <input type="checkbox"/> Other: _____  |

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### **DETAILED ACTION**

This office action is in response to applicant's election filed June 30, 2005.

#### ***Election/Restrictions***

Claims 15-20 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected invention, there being no allowable generic or linking claim. Election was made **without** traverse of claims 1-14 in the reply filed on June 30, 2005.

#### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-6 and 8-14 are rejected under 35 U.S.C. 102(e) as being anticipated by Hashimoto et al. (U.S. 2003/0124762).

Hashimoto (Fig. 4A-5A, 7A-E) discloses:

(cl. 1) a method of manufacturing a semiconductor device, comprising (a) connecting a first substrate (10) with a second substrate (20) disposed to be stacked on the first substrate; and (b) cutting the first substrate (Fig. 4B) and the second substrate (Fig. 4C) in the same process of forming an optical device with a cutting tool (36, 38), wherein: the cutting tool includes a plurality of cutters disposed close to each other,

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having different cut widths; and the first substrate and the second substrate are cut with the cutting tool so that the first substrate and the second substrate have different cut widths, in step (b);

(cl. 2) the first substrate with optical transparency (0091) and forming the second substrate to include a part which becomes an optical chip including an optical unit with the part including at least a plurality of parts;

(cl. 3) inserting the cutting tool into the first substrate and the second substrate from a side of the first substrate (Fig. 4B-C);

(cl. 4) the first cutter (36) larger than cutting a cut width of the second substrate by the second cutter (38);

(cl. 5, 6) providing the length of the first/second cutter larger than the thickness of a part, which is cut, of the first substrate (Fig. 4B);

(cl. 8) forming an electrode (34) on the part which becomes an optical chip (100) on the second substrate, and outside the optical unit; and removing a part of the first substrate located above the electrode with the first cutter in step (b) (Fig. 4B);

(cl. 9) and attaching a sheet (21) to second substrate and cutting second substrate not to penetrate sheet (Fig. 4C);

(cl. 10) forming trench (12) along cut line before step b/cutting (Fig. 4A);

(cl. 11) and further cutting and separating the first and second substrates into individual pieces (Fig. 5A), where the first and second substrates are placed face-to-face fixed to each other;

(cl. 12) fixing the substrate by a spacer (18);

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(cl. 13) where the fixing includes a transparent adhesive between substrates (Par. 0099);

(cl. 14) and forming connecting part (i.e. top surface of substrate connecting substrate units, Fig. 4A) which connects a plurality of covers (14,21) on first and second substrates in step a [*prior to being cut*] and cutting the connecting part (Fig. 4A-B).

Claims 1, 3-7 and 11 are rejected under 35 U.S.C. 102(e) as being anticipated by Fukasawa et al. (U.S. 6,657,282).

Fukasawa (Fig. 10A-F) discloses:

(cl. 1) a method of manufacturing a semiconductor device, comprising (a) connecting a first substrate (22) with a second substrate (51) disposed to be stacked on the first substrate; and (b) cutting the first substrate and the second substrate (Fig. 10A-D) in the same process of forming device with a cutting tool (26, 27A), wherein: the cutting tool includes a plurality of cutters disposed close to each other (i.e. second cut performed after first), having different cut widths; and the first substrate and the second substrate are cut with the cutting tool so that the first substrate and the second substrate have different cut widths, in step (b);

(cl. 3) inserting the cutting tool into the first substrate and the second substrate from a side of the first substrate (i.e. top portion);

(cl. 4) the first cutter (26) larger than cutting a cut width of the second substrate by the second cutter (27A);

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(cl. 5, 6) providing the length of the first/second cutter larger than the thickness of a part which is cut, of the first substrate (Fig. Fig. 10B,E);

(cl. 7) positioning the fist cutter with an interval from a surface of the second cutter at the time of cutting the second substrate (i.e. likewise the angle blade would also form a plurality of cutters with different widths since the cut results in 1<sup>st</sup> and 2nd substrates having different first and second cut widths, as shown in Figure 10B);

(cl. 11) and further cutting and separating the first and second substrates into individual pieces (Fig. 10F), where the first and second substrates are placed face-to-face fixed to each other.

### ***Conclusion***

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The prior art discloses the use of cutting substrates with a first and second blade.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to James M. Mitchell whose telephone number is (571) 272-1931. The examiner can normally be reached on M-F 8:00-4:00.


If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Carl Whitehead Jr. can be reached on (571) 272-1702. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Jmm  
September 3, 2005



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